

## **AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims:**

1           1. (Currently amended) A method to facilitate debugging a platform-  
2 independent virtual machine, comprising:  
3           providing an agent on the platform-independent virtual machine, wherein  
4 the agent provides a set of functions for accessing a plurality of variables in the  
5 platform-independent virtual machine;  
6           adapting the platform-independent virtual machine to call the set of  
7 functions within the agent;  
8           examining a current state of the plurality of variables in the platform-  
9 independent virtual machine using the agent; and  
10          communicating the current state of the plurality of variables to a host  
11 machine, wherein an operator of the host machine can analyze the current state of  
12 the plurality of variables to determine if the platform-independent virtual machine  
13 is operating correctly and, if not, to determine a possible cause of incorrect  
14 operation.

1           2. (Original) The method of claim 1, wherein the agent includes a core  
2 portion that is common across multiple platforms and a platform-specific portion  
3 for each platform.

1           3. (Original) The method of claim 2, wherein the platform-specific portion  
2 includes features and structures related to a specific platform-independent virtual  
3 machine.

1           4. (Original) The method of claim 1, wherein adapting the platform-  
2 independent virtual machine to call the set of functions within the agent involves  
3 inserting checkpoints within executable code for the platform-independent virtual  
4 machine.

1           5. (Original) The method of claim 4, wherein a checkpoint uses the set of  
2 functions to examine the current state of the plurality of variables and  
3 communicate the current state of the plurality of variables to the host machine.

1           6. (Original) The method of claim 1, wherein communicating the current  
2 state of the plurality of variables to the host machine involves using one of a direct  
3 coupling and a network coupling.

1           7. (Original) The method of claim 1, wherein the agent only includes  
2 resources for collecting data, thereby limiting memory usage of the agent.

1           8. (Currently amended) A computer-readable storage medium storing  
2 instructions that when executed by a computer cause the computer to perform a  
3 method to facilitate debugging of a platform-independent virtual machine, the  
4 method comprising:  
5           providing an agent on the platform-independent virtual machine, wherein  
6 the agent provides a set of functions for accessing a plurality of variables in the  
7 platform-independent virtual machine;

8           adapting the platform-independent virtual machine to call the set of  
9   functions within the agent;  
10          examining a current state of the plurality of variables in the platform-  
11   independent virtual machine using the agent; and  
12          communicating the current state of the plurality of variables to a host  
13   machine, wherein an operator of the host machine can analyze the current state of  
14   the plurality of variables to determine if the platform-independent virtual machine  
15   is operating correctly and, if not, to determine a possible cause of incorrect  
16   operation.

1           9. (Original) The computer-readable storage medium of claim 8, wherein  
2   the agent includes a core portion that is common across multiple platforms and a  
3   platform-specific portion for each platform.

1           10. (Original) The computer-readable storage medium of claim 9, wherein  
2   the platform-specific portion includes features and structures related to a specific  
3   platform-independent virtual machine.

1           11. (Original) The computer-readable storage medium of claim 8, wherein  
2   adapting the platform-independent virtual machine to call the set of functions  
3   within the agent involves inserting checkpoints within executable code for the  
4   platform-independent virtual machine.

1           12. (Original) The computer-readable storage medium of claim 11,  
2   wherein a checkpoint uses the set of functions to examine the current state of the  
3   plurality of variables and communicate the current state of the plurality of  
4   variables to the host machine.

1           13. (Original) The computer-readable storage medium of claim 8, wherein  
2     communicating the current state of the plurality of variables to the host machine  
3     involves using one of a direct coupling and a network coupling.

1           14. (Original) The computer-readable storage medium of claim 8, wherein  
2     the agent only includes resources for collecting data, thereby limiting memory  
3     usage of the agent.

1           15. (Currently amended) An apparatus that facilitates debugging of a  
2     platform-independent virtual machine, comprising:  
3             a providing mechanism that is configured to provide an agent on the  
4     platform-independent virtual machine, wherein the agent provides a set of  
5     functions for accessing a plurality of variables in the platform-independent virtual  
6     machine;  
7             an adapting mechanism that is configured to adapt the platform-  
8     independent virtual machine to call the set of functions within the agent;  
9             an examining mechanism that is configured to examine a current state of  
10    the plurality of variables in the platform-independent virtual machine using the  
11    agent; and  
12             a communicating mechanism that is configured to communicate the  
13    current state of the plurality of variables to a host machine, wherein an operator of  
14    the host machine can analyze the current state of the plurality of variables to  
15    determine if the platform-independent virtual machine is operating correctly and,  
16    if not, to determine a possible cause of incorrect operation.

1           16. (Original) The apparatus of claim 15, wherein the agent includes a core  
2     portion that is common across multiple platforms and a platform-specific portion  
3     for each platform.

1           17. (Original) The apparatus of claim 16, wherein the platform-specific  
2           portion includes features and structures related to a specific platform-independent  
3           virtual machine.

1           18. (Original) The apparatus of claim 15, further comprising an inserting  
2           mechanism that is configured to insert checkpoints within executable code for the  
3           platform-independent virtual machine.

1           19. (Original) The apparatus of claim 18, wherein a checkpoint uses the set  
2           of functions to examine the current state of the plurality of variables and  
3           communicate the current state of the plurality of variables to the host machine.

1           20. (Original) The apparatus of claim 15, wherein communicating the  
2           current state of the plurality of variables to the host machine involves using one of  
3           a direct coupling and a network coupling.

1           21. (Original) The apparatus of claim 15, wherein the agent only includes  
2           resources for collecting data, thereby limiting memory usage of the agent.